

## Transregional institutional learning in Europe: prerequisites, actors and limitations

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**Transregional institutional learning in Europe: Prerequisites, actors and limitations**

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## Transregional institutional learning in Europe: Prerequisites, actors and limitations

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### Abstract

Transregional institutional learning has become a buzzword in European policy-making during the last decade. A theoretical concept how to initiate, observe and support transregional institutional learning, however, is still missing. The following paper provides a theoretical framework to explain preconditions for transregional institutional learning and investigates the potentials of three different channels for learning: multinational firms, benchmarking studies and projects, interactive policy networks. The results show that there is not much proof for enthusiastic expectations on future learning processes, but options for EU policies to enhance transregional learning effects.

### Abstract

Transregionales institutionelles Lernen ist als Ziel in zahlreichen politischen Programmen der vergangenen Jahre formuliert worden. Ein theoretisches Konzept der Initiierung, Messung und Förderung institutionellen Lernens fehlt jedoch bislang. Der folgende Text bietet eine solche theoretische Grundlage zur Erklärung wesentlicher Voraussetzungen transregionalen institutionellen Lernens und wendet dieses theoretische Konzept auf Erfahrungen mit drei unterschiedlichen Kanälen transregionalen Lernens an: multinationale Unternehmen, benchmarking Untersuchungen und Projekte und interactive Politiknetzwerke einzelner

Akteure. Die Ergebnisse geben nicht viel Anlass zu großen Erwartungen an transregionale institutionelle Lernprozesse im allgemeinen, bieten aber zumindest einige Optionen eines veränderten Einsatzes der EU-Instrumente, um transregionale institutionelle Lerneffekte zu erhöhen.

L'apprentissage institutionnel interrégional en Europe: les préalables, les agents et les limites.

Wink

L'apprentissage institutionnel interrégional est devenu un mot branché dans la mise au point des politiques en Europe pendant les dix dernières années. Il manque toujours une notion théorique de comment piloter, observer et soutenir l'apprentissage institutionnel interrégional. Cet article cherche à fournir un cadre théorique pour expliquer les conditions préalables de l'apprentissage institutionnel interrégional et examine le potentiel de trois filières d'apprentissage: à savoir, les sociétés multinationales, les études et les projets sur la fixation des points de référence et les réseaux de politique interactifs. Les résultats laissent voir un manque de preuves quant aux attentes positives des futurs processus d'apprentissage, mais plutôt des options concernant les politiques de l'Ue destinées à améliorer les effets d'apprentissage interrégionaux.

Apprentissage interrégional / Sociétés multinationales / Aéronautique / Fixation des points de référence

Classement JEL: O32; R38; R58

Aprendizaje institucional transregional en Europa: requisitos previos, protagonistas y limitaciones

Rüdiger Wink

Abstract

En la última década el término "aprendizaje institucional transregional" se ha puesto de moda en la elaboración de las políticas europeas. Sin embargo, todavía falta un concepto teórico sobre cómo iniciar, observar y apoyar el aprendizaje institucional transregional. En el siguiente documento se incluye una estructura teórica para explicar las precondiciones para el aprendizaje institucional transregional y se investigan las posibilidades de tres diferentes canales de aprendizaje: las empresas multinacionales, los estudios y proyectos de análisis comparativo, y las redes de políticas interactivas. Los resultados indican que no existen muchas pruebas de expectativas entusiastas sobre los futuros procesos de aprendizaje; sin embargo, existen opcio-

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nes para las políticas de la UE a fin de mejorar los efectos del aprendizaje transre-  
gional.

Keywords:

Aprendizaje transregional

Empresas multinacionales

Aeronáutica

Análisis comparativo

JEL Codes: O32, R38, R58

1. Introduction

Within the last two decades, a renaissance of the region as the main locus of innovation processes was observed in theoretical and empirical investigations as well as policy programs (KRUGMAN, 1991; FUJITA; THISSE, 2002; MASKELL; MALMBERG, 2002). One non-intended and often criticized outcome of such spatial concentration is a growing disparity between regions in terms of economic and innovation capacity (KALDOR, 1970; ACS, 2002; CASTELLACI, 2006). Consequently, several approaches have been introduced to overcome spatial barriers towards learning processes by “interregional or transregional institutional learning”. With the relatively high level of diversity in Europe compared to other global areas, a bigger and more fruitful pool of ideas for successful institutions fostering regional growth and innovation is expected. The availability of knowledge on success regions and their strategies has been drastically improved in the last two decades with the help of European and national partnership programs, best practice reports, business consultancy products and publications (COOKE ET AL., 2006; OECD, 2001, EUROPEAN COMMISSION, 2006). These approaches took up relatively old ideas on policy diffusion among federal units and connected these concepts with systematic learning models based on joint monitoring and benchmarking processes (GRAY, 1973; DOLOWITZ; MARSH, 1996; SABEL, 1996, Iurcovich et al., 2006). But despite all these efforts, empirical evidence shows that disparities in economic performance between European regions

are still growing and only few regions succeeded to catch up by following the example of other regions (EUROPEAN COMMISSION, 2006a; CASTELLACI, 2006). There is still a controversial discussion in the literature, whether this lack of success is caused by missing willingness to implement suitable interregional organizations for learning or by the general impossibility of interregional learning (GERTLER ET AL., 2000; DODGSON; BESSANT, 1996).

The following paper will deal with three main questions in this context:

- Which kind of knowledge is normally the subject of private and public transregional institutional learning programs, and what are prerequisites and spatial barriers towards institutional learning?
- How are programs on the European and on the national level designed to achieve learning beyond regional borders, and what is said on their impact?
- What can be learned from experiences with transregional institutional learning on future steps for theory and policy?

We will use the term “transregional learning” in contrast to interregional learning to stress that learning is an interactive process, which is not restricted to fixed sender-receiver positions, and that these processes are always integrating single persons or organizations as part of regions and not the whole regions. At the beginning, we will present a theoretical basis to understand the specificities and prerequisites of transregional institutional learning processes.

## 2. Transregional institutional learning: The theoretical perspective

The term transregional learning normally refers to two different types of knowledge: knowledge to be used for product and process innovations within organizations in different regions, and knowledge needed for the design and implementation of institutions on private and/or public level. Institutions include all formal and informal rules or habits established to reduce

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the mutual uncertainty on the others' action in a certain context (NORTH, 1990). This paper only deals with learning processes on the design, generation, implementation and effects of institutions. In many political programs and firm strategies, the term learning replaced older concepts of transferring knowledge or technology. The rationale behind this replacement was the realisation that the transfer metaphor was not able to integrate the context and tacit dimensions needed to actually understand the cognitive content of a message (SZULANSKI, 1996; AMIN; COHENDET, 2003; ASHEIM, 2002). Furthermore, most concepts of transfer focused on one-way dimensions of knowledge exchange, which causes challenges of suitable incentives for the sender to share his/her knowledge with the receiver and for both parties to adjust their cognitive patterns to each other (see for the discussion on reverse [not interactive] knowledge transfer in multinational corporations ANDERSSON, 2003; PISCITELLO, RABBIOSI, 2006).

Learning in general means conscious or sub-conscious processing of own or foreign experiences or creative ideas (ANDERSON, 1995; AKBAR, 2003). As the set of individual experiences and ideas is limited, interactive processes with others open up new opportunities for learning. Any successful learning requires adjustments of the individual knowledge base. On an individual knowledge processing level, learning psychology stresses the interaction between the individual and the environment (KUNDA, 1999). Every individual is equipped with inherited cognitive patterns and experiences from former social contacts (LAUGHLIN, 1996; RIZZELLO, 2000). Any new data have to pass individual cognitive filters to be assessed according to its information value. To avoid misperceptions of the incoming data from written, oral or non-verbal communication, common communication codes have to be used. Any individual investment to adjust the cognitive filters for better understanding of messages from others is only rational, if valuable and credible information as a product of the communication is expected (WINK, 2003). Therefore, organizational learning concepts deal with tools to overcome cognitive and incentive barriers (SCHULZ; LLOYD, 2001; NONAKA ET AL., 2001). Cognitive

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3 barriers refer to the requirement of common communication codes, including language, ter-  
4 minology, technology and style for communication, while the incentive barriers are caused by  
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6 fears of communication partners to be exploited by non-cooperative partners, who use a free-  
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8 rider option to receive data without providing.  
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15 Concepts of organizational learning attempt to realise interactive learning processes between  
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17 different members of the organizations (NONAKA ET AL., 2000; ARGYRIS; SCHÖN, 1996). Cog-  
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19 nitive tools refer first of all to technological solutions for data availability like Intranet or in-  
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21 ternal documentation programs. These technological solutions shall help to reduce the de-  
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23 pendence on single persons' experiences and to increase joint data pools. Problems, however,  
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25 occur due to the need for structuring and processing masses of data, the need for standardisa-  
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27 tion of data input and expression and the limitation of the individual incentives to contribute  
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29 to the common pool. Therefore, organisational programs of standardisation are implemented  
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31 to improve the interaction between single organisational members (TEECE, 2000; MAGAL-  
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33 HAES, 1998). Many schemes of benchmarking within organizations are based on comparisons  
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35 of standardised results in different parts of an organization. For those tacit elements of knowl-  
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37 edge, which can only hardly be standardised and expressed to others, communities of practice  
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39 are established to learn via mutual participation in routines and action (BROWN; DUGUID,  
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41 1991; BRUSONI; PRENCIPE, 2001). All these activities strive for the improvement of mutual  
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43 cognitive understanding. Incentive barriers are caused by the lack of trust into the willingness  
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45 of others to provide the best possible contributions to the interaction (NOOTEBOOM, 1998).  
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48 Organizational incentives include mutual assessments of contributions, internal promotion  
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50 and sanction regimes. As learning outcomes are in most cases fuzzy and hard to define in ex-  
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52 plicit terms, a broad distinction of organizational learning at least provides four general types  
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54 of learning outcomes (ARGYRIS; SCHÖN, 1996):  
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- formalised learning, without actual effect on the knowledge base: learning partners pretend to follow new rules without actually changing their actions
- single loop learning, only covering the surface of the knowledge base: learning partners follow the examples of others without actually understanding the reasons for single actions and without adjustment towards other contexts,
- double loop learning, affecting the core of the knowledge base: learning partners understand the deeper meaning of others' experiences and are able to adjust them to other contextual circumstances,
- deuterio loop learning, affecting the process of learning itself: learning partners understand how they learn and how they can influence their learning performance with the options to improve organizational learning processes.

Only in few organizations, deuterio loop learning has been achieved so far. As the development of new technologies, processes and products is more and more dependent on interaction during the process of knowledge generation, examination and exploitation, inter-organizational learning processes got into the focus of many firms and research organizations (LANE ET AL., 2001; TSAI, 2001). Two different dimensions dominated schemes for these inter-organizational learning processes: The first and most common dimension is based on processing of benchmarking and best practice studies with the objective to look for solutions found in benchmark or best practice organisations to be investigated and transferred to other organizational contexts (BROWNE ET AL., 1995). The second approach stresses the exchange and joint development of tacit knowledge elements and looks for communities of practice and networks with members from different organizations (GRABHER, 2004; GIULIANI; BELL, 2005; STEINER; HARTMANN, 2006). By mutual exchange of experiences and joint searches for solutions, learning inputs for all participating organizations are expected. The investigation of the sources, emergence and evolutionary development of these network structures, however, is

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3 still in an early stage of its explanatory potential (BRENNER, 2005; ANDERSSON ET AL., 2006;  
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5 STEINER; PLODER, 2007). We will find both dimensions – the benchmarking and the network  
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7 dimension – in the context of interregional institutional learning processes.  
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12 Interregional learning might cause similar challenges as inter-organizational learning, because  
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14 a strict common organizational umbrella with hierarchies and intra-organizational learning  
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16 regimes and objectives is missing. An additional dimension in the interregional context, how-  
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18 ever, is space. The relevance of geographical proximity for learning has been discussed con-  
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20 troversially in the scientific literature (BOSCHMA, 2005; SCHLINK, 2006). The controversies do  
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22 not affect primarily the contributions of geographical proximity to learning but the relevance  
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24 of these contributions (BATHELT ET AL., 2004). In the cognitive context, geographical prox-  
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26 imity reduces the costs for face-to-face (F2F) communication. Frequent F2F communication  
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28 can help to develop joint codes of interaction and to overcome mutual misunderstandings.  
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30 Furthermore, additional options for interaction outside the professional context, e.g. social  
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32 events, common childcare activities, are available in the case of geographical proximity  
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34 (SORENSEN, 2003). Common language and cultural norms should also improve the basis for  
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36 mutual understanding. The impact of geographical proximity on incentives refers to the role  
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38 of social control and reputation. Within a joint regional neighbourhood, default in cooperation  
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40 might cause severe damage on future chances to be integrated into network activities. Addi-  
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42 tionally, common institutional routines with already existing network structure on different  
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44 issues can reduce the costs for generation of new and more intense interactions within inter-  
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46 organizational learning networks, as the members can refer to common historical institutional  
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48 pathways. Consequently, many European and national programs, to foster regional develop-  
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50 ment and innovations, like poles de compétitivité in France, competence centres in Austria,  
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52 European innovating regions on the EU level, stress the importance of geographical  
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proximity within regional networks and innovation systems (MARTIN; SUNLEY, 2003; EICKELPASCH; FRITSCH, 2005 with different views towards these political approaches).

It is beyond the aim of this paper to assess the relevance of geographical proximity for learning and possible dangers of lock-in effects within close regional networks (HASSINK, 2005; BOSCHMA; FRENKEN, 2006). For the theoretical understanding of interregional learning and the specificities of its requirements, it is more fruitful to take a look at possible alternatives to geographical proximity (GALLAUD; TORRE, 2004; BOSCHMA, 2005). Candidates in the literature for such alternatives are temporary geographical proximity and particularly relational proximity, including social, institutional and cognitive proximity (LIYANAGE ET AL., 2007). Temporary geographical proximity does not neglect the benefits of F2F communication and social control. The basic hypothesis behind this concept, however, is the expectation that it is sufficient to realise these benefits in a restricted time frame, e.g. during industrial conferences, fairs or project meetings (BATHELT; SCHULDT, 2005). The learning partners can use these short-term communications to implement joint codes of interaction, which they then take further by contacts via Internet or telephone. These potentials of temporary geographical proximity are even more promising, if they can be based on elements of relational proximity. Relational proximity can be rooted in common professional backgrounds, which help to achieve cognitive proximity (DUPUY; TORRE, 2006). For example, engineers from the same technological field might be able to correspond frankly without mis-perceptions, even if they are not located closely to each other. This common professional background can also lead to mutual trust, as the partners can refer to common professional norms without having joint formal frameworks. Social proximity is based on personal linkages based on joint education, social background or social events. Again, cognitive barriers are reduced by references to other communication codes and styles, and trust is based on the expectation that the personal relationships lead to a higher ranking of reputation. Institutional proximity covers joint formal or

informal rules, which reduce the uncertainty on possible free-rider behaviour. For the reduction of cognitive barriers, the common institutional framework helps to create the basis for repeated long-distance communications within a standardised setting.

This general concept of learning can be applied to different forms of knowledge. In the context of transregional learning, the generated, diffused and communicated knowledge can include “content knowledge” referring to the content of new technologies, production processes or products, as well as “institutional knowledge” covering the capabilities to organise learning systems including the relevant actors, channels, rules and incentive schemes. In the following, we will take a look at three different strategies to generate transregional institutional learning systems: a transregional firm perspective, a transregional benchmarking perspective, and a transregional actors’ network perspective.

### 3. The transregional firm perspective on institutional learning

For multinational firms, acting in different regional contexts belongs to usual challenges. They reacted differently to these challenges within their organization and their relationships to other firms and organizations in different regions (PEDERSEN ET AL., 2003 on empirical evidences). Most of the literature on transregional organizational learning deals with strategies and tools to enhance interaction between members of the same organization within different regions (ALMEIDA ET AL., 2002; GUPTA; GOVINDARAJAN, 2000; CANTWELL; MUDAMBI, 2004). ORLIKOWSKI (2002) describes such strategies to achieve openness within organisations based on empirical observations. Again, these strategies follow different forms of proximity to overcome learning barriers:

- the emergence of a common identity, i.e. the achievement of common cognitive frames and interpretation of new experiences (cognitive proximity)
- the intensification of F2F communication, i.e. enhancing geographical proximity,

- the use of standardisation, i.e. improving institutional proximity by joint formal norms,
- the creation of individual incentives for knowledge exchange, i.e. creating some kind of cultural proximity by following joint objectives
- the promotion of opportunities to participate, i.e. arranging organisational proximity with a wide range of possible participants.

These learning strategies mainly affect technological content. By exchanging experiential knowledge how to develop this content, the members of the organizations also receive and process data on the institutional framework within the organizational units and how it works in different regional contexts. For transregional institutional learning this way of collective learning is however limited, as most multinational firms follow a joint standardised institutional framework within all national or regional units. The single units then have to look for strategies to adjust their internal rules to the regional context but not for communication within the organization. The theoretical ideal of a “transnational organization” (BARTLETT; GHOSHAL, 1989) with a high degree of decentralization of competencies and organizational patterns according to different national cultures still seems to be a too complex structure for most multinational companies.<sup>1</sup> As a result, there is single and double loop learning within the multinational firm, but without taking into account the regional institutional dimension.

Other parts of the literature discuss the impact of foreign direct investments of multinational firms on the countries and regions of destination. Here again, geographical proximity is identified as a means to achieve knowledge spillovers (CANTWELL; PISCITELLO, 2005; FUNKE; NIEBUHR, 2005; OERLEMANS; MEEUS, 2005 particularly stressing the importance of supply

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<sup>1</sup> The experiences with the Swedish-Swiss firm ABB and its complex decentralized structure still seem to be a warning for many managers to restrict organizational complexity and to keep the power in a centralized management.

chains for these effects). The multinational firms act in these cases as gatekeepers using their own research and development and experiences from other regions as an input to localised supply chain networks. Most of the studies, however, concentrate on effects on regional productivity and spillovers. These effects are not necessarily based on joint learning schemes and processes, other influences can be caused by labour mobility within the region (BRESCHI; LISONI, 2001; DAHL; PEDERSEN, 2003). Thus, the institutional dimension is not always affected by these types of spillover analysis.

One specific case within this context is the multinational structure of Airbus (LIYANAGE ET AL., 2007; ALFONSO-GIL; TALBOT, 2007). The specificities are rooted in the strong political influence on location decisions enforcing a share of work-loads between production locations on four different European countries (France, Germany, Spain and UK) according to the amount of subsidies and the high level of technological and functional specialisation in the four countries. This specific structure made it necessary for Airbus to focus on regional (or national) collaboration at the different locations and to adjust these forms of collaboration to different institutional contexts. With time, ten centres of excellence have been established at the different locations. During the last decade, Airbus began to process experiences in the different regional contexts and tried to introduce these in the other regions. One example on this is the way, how Airbus initiates and supports activities to build up regional innovation capabilities on relevant technologies and services. In Midi-Pyrénées and Aquitaine, Airbus took part in networks with other big multinational companies from different sectors to interact with small, specialised technology driven firms, engineering companies and research institutes, e.g. in the field of electronic embedded systems. These experiences with this type of cooperation within some kind of knowledge cluster without direct competitors were also used to support a new cluster initiative in Germany on the development of composites as new advanced materials in different industries. As Airbus faced missing capabilities in composites in

the UK wing industry, they looked for new partners with necessary technological expertise to cooperate with existing suppliers and other demanders within clusters similar to their experiences in France and Germany. These regional initiatives, however, are still sufficiently flexible to adjust to regionally specific types of organizations (e.g. share of public research organizations, roles of universities, professional groups or chambers) and rules of interaction. Hence, Airbus tries to develop deutero loop learning based on experiences at single locations. For the interaction between the different regional settings, they use the organizational proximity of Airbus with joint formalised rules and organizational proximity (WINK, 2007).

These flexible strategies seemed, however, restricted to those segments, where Airbus looks for advantages caused by diversity of technological knowledge in different organizations and sectors. In those segments, where Airbus focuses on specific competitive advantages, they neglect the regional institutional specificities and strengthen standardisation of knowledge interaction processes to increase the cognitive proximity of the integrated persons and organizations. One example for this is the “concurrent engineering” program, where engineers from different Airbus locations and selected supply organizations work simultaneously on concrete technological problems (LIYANAGE ET AL., 2007). The standardisation and formalization refers to the technological requirements (software etc.) as well as knowledge style and rules of interaction. These generalised rules for the whole multinational company underline the low relevance paid towards institutional specificities in the different regions involved. Airbus seems to trust in the dominating influence of cognitive and organizational proximity to maintain a joint learning atmosphere. For all organizations and actors being dependent on other forms of proximity (social, cultural, geographical), these restrictions lead to exclusion from joint knowledge processing.



Summing up, multinational firms contributed so far only in a limited way towards transregional institutional learning. In most cases, the management rationality looks for strengthening the organizational proximity within the firms and the cognitive proximity via standardisation and formalisation. Only in those cases, when the multinational firms depend on learning processes within the regions, attempts to systematically process institutional experiences and adjustments towards the institutional specificities can be observed.

#### 4. The transregional benchmarking perspective on institutional learning

Benchmarking became in the last decades a typical tool of consultancy companies and firms to gain knowledge from experiences in other organizations (KHANNA ET AL., 1998; ZAIRI; SINCLAIR, 1995). The observation of the attractiveness to private firms also raised the interest of the public sector with a high amount of benchmarking studies on the performance in different regions (POLT ET AL., 2001; HUGGINS, 2003; TOMA, 1997; HEINELT ET AL., 2003 on experiences in European cohesion policies). Supranational and international organizations like the European Union or the OECD created their own database to offer quantitative indicators and reports to their members (see for example the European Innovation Scoreboard by the EUROPEAN COMMISSION, 2005a and b). Benchmarking shall provide knowledge for processes to define, assess and adjust organizational strategies. Basic characteristics are the orientation on comparisons between different units (in our case regions), the identification of best practises and ranking according to the performance of the compared regions, the integration of the results into an internal communication and learning process to identify causes, prerequisites and barriers to transfer of best practises and the implementation of internal processes of change towards the best practises (SPENDOLINI, 1992). Accordingly, the basic objectives of benchmarking are the availability of information, motivation via comparison and hints to structure processes of strategic change and adjustment (IURCOVICH ET AL., 2006).



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Three crucial prerequisites determine the impact of benchmarking processes. The first prerequisite refers to the access to information on the units of comparison. Most of the benchmarking studies are focused on quantifiable data reports and formal observations, as these data are available without cooperation of the compared units (KAPLAN; NORTON, 2001 for approaches to link benchmarking with strategy processes based on business score cards). These explicit data, however, cause the risk to neglect the tacit dimension of experiences. For example, many benchmarking reports deal with information on single policy instruments and their impact on regional economic indicators. Without tacit knowledge, which explains how to use the instrument, how to adjust to different needs of addressees and how to integrate into different institutional settings and social capital structures, any decision to implement the instrument in other regions cause disappointments, as the observed incentives and actions might not be achievable within another regional setting.

The second prerequisite is the identification of suitable performance indicators. For many dimensions, quantifiable indicators can be used to assess the impact of single activities. Problems, however, occur in those cases, where quantifiable indicators are not available and qualitative indicators are only poorly defined by different organizations. This leads to the risk of mis-interpretations, as different organizations (regions) might mean different things within their reporting. The European Union attempts to integrate the specific knowledge from the regions on best practices by providing online access to best practice reports and by supporting formal networks between single regions to execute benchmarking studies (EUKN, 2006; EUROPEAN COMMISSION, 2006b; EIR, 2007). These reports, however, only reveal explicit knowledge. The tacit dimension can only be explored by direct interactive contacts between regional representatives, who need incentives to cooperate in such an intensive way with each other. Thirdly, the results have to be integrated into a process of strategic positioning and changes (ZAIRI; SINCLAIR, 1995). Again, the institutional context in the single regions defines

the framing conditions for such a process and restricts a simple “copy-and-paste-mechanism” to process the experiences from best practises.

As a result, many benchmarking studies do not provide relevant information for the regions, as they compare regions with benchmarks, which emerged under completely different conditions, for example benchmarking of “learning regions” or “knowledge regions” regardless of agglomeration density, proximity to other regions and structures of qualifications. Other problems of benchmarking studies refer to performance indicators, which might not be relevant for the regions intending to learn, for example patent output in rural regions or share of employment in highly qualified business services in old-industrial regions. Considering the third mentioned prerequisite for successful “benchlearning”, the actual impact of benchmarking studies on transregional institutional learning depends on the implementation into regional change processes. Only if there is an awareness of the regional decision-makers in firms, policy and associations, that changes are needed, and that experiences from other regions might help to structure this change process, the benchmarking information will find an addressee (HASSINK, 2005, on limits to those incentives within regional innovation networks). Within many European and national programs, regions are encouraged to follow recommendations from benchmarking studies without taking into account whether the regions are actually convinced by the result. Consequently, the impact is then restricted to formalised learning – formal announcements to change instruments of regional development – or single loop learning, which means simple imitation of the instrument without consideration of the regional differences. Other centralised forms to enforce transregional learning from benchmarking include regional contests, where the conditions for successful applications are based on results from best practice regions (EICKELPASCH; FRITSCH, 2005; KARL; WINK, 2006 on German experiences). Here again, idealised institutional settings of “learning regions” or “regional innovation systems” are defined for the regions to apply without considering the usefulness in con-

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crete regional situations. Private consultancy firms took up the idea of benchmarking studies on regions to act as knowledge brokers between the regions (MULLER; ZENKER, 2001, for a discussion of the role of those services for knowledge brokerage within a region). The quality of this brokerage service depends on the capability to adjust observations from successful regions to other regional circumstances. In most cases, the adjustment only refers to general models of knowledge specialisation, development of regional unique selling propositions, location marketing concepts and necessary infrastructure investments. The institutional dimension is often excluded from the adjustments, as idealised organizational settings are transferred between the consulted regions. As a consequence, the implementation of proposed strategies is hindered by the institutional structures.

Summing up, the benchmarking approaches often lack necessary tools and incentives to integrate institutional experiences and to initiate joint transregional learning processes. Therefore, simple imitations of best practises cause disappointing results for regions striving to catch up. The option to extract more generalized knowledge on suitable institutional approaches for regional economic development and changes out of the benchmarking studies seemed to be too ambitious for transregional learning processes, as these required (double and deuterio loop) learning skills are normally generated within learning organizations along long-term evolutionary processes with possibilities for individuals to investigate their own learning routines and strategies. Consequently, a report on regional benchmarking methodologies for mutual learning within the European network of innovating regions came to the recommendation to focus on benchmarking processes, where the regional actors themselves are involved to identify suitable benchmarks and indicators and are actually motivated to look for ways of improvement by comparing (IURCOVICH et al., 2006).

##### 5. The actors' network perspective on transregional institutional learning

This third perspective takes up the idea of communities of practice used within inter-organizational learning processes (BROWN; DUGUID, 1990) and relates it to the development of regional institutions. While the benchmarking processes often lead to a comparison of a high number of single regions, their institutional settings and performances and the publication of data is distributed to a high number of actors, the actors' networks refer to a relatively small number of individual experts from few different regions, who exchange their experiences in a very intensive way and look for common aspects within their institutional pathways. Nevertheless, the umbrella organization for these mutual interactions can enclose a high number of regions. The actual interaction, however, is normally restricted to fewer contacts. Individual experts include in this context public servants from regional authorities as well as representatives from single firms or politicians, who are engaged in a specific context. The intensive way of interaction opens up the opportunities to develop cognitive proximity despite the different regional institutional and cultural settings, while the incentives for this interaction are caused by the mutual benefits of the cooperation and the organisation of such communities, which are similar to exclusive clubs with a strong relevance of reputation and required contributions. Three different approaches can be distinguished on the European level:

- mutual learning within a joint European network organization, where actors cooperate to get access to similar institutions in other regions (e.g. business incubator networks, regional development agencies networks or innovation relay centre networks)
- mutual learning within transregional projects dealing with a specific joint objective (e.g. INTERREG projects dealing with a wide range of topics from knowledge transfer to water and river management or metropolitan cooperation)

- mutual learning within networks of regions, which emerged particularly to improve the exchange of experiences (e.g. European innovating regions, European regions of knowledge or European regions of innovation).

The need for exclusiveness and mutual benefits restricts the number of suitable partners for transregional learning activities of a region. Within economic geography, world city network approaches already tried to identify, how intensive economic linkages emerge between dominant agglomerations (DERUDDER ET AL., 2003; TAYLOR, 2001, ALDERSON; BECKFIELD, 2003). Accordingly, metropolitan regions belong to the most active regions within the INTERREG context (GÖRMAR 2005; AHLKE et al., 2007). But even in important agglomerative locations, intensive flows are restricted to those segments, where similarity or complementary structures path the way to mutual benefits (MAGGIONI; UBERTI, 2006). Ideally, close linkages due to similar economic sectors, agglomeration densities, social structures, immigration or demographic challenges should help to find joint solutions and benefits from cooperation. In the abovementioned context of civil European aeronautics, an intensive cooperation between individual experts in the German region of Hamburg and the French regions Midi Pyrenées and Aquitaine was launched during the last five years (WINK, 2006). The cooperation included joint initiatives in the field of qualification with the option for French and German apprentices to spend several months in the other region and learn more about the foreign language, culture and qualification systems. This mutual exchange program could only be realised, after the German and French specialists in the public administration as well as in the big aeronautics companies defined modules, which belong to both qualification programs and can be mutually accepted. The institutional umbrella for this procedure had to be a formal contract between Hamburg and Midi Pyrenées and Aquitaine. Further elements of the joint learning initiatives on a more private level include mutual visits of entrepreneurs organized by industry associations to know more about the specific knowledge elements and organizational schemes in the

other region. These activities, however, are always restricted to those elements, where no direct competition between firms or the regions as a whole are given. Additionally, the low density of cluster structures within the aeronautics regions can restrict the benefits of the interregional cooperation (LUBLINSKI, 2003, on empirical results, and PISCITELLO; RABBIOSI, 2006, on the general importance of regional embeddedness for constructive interregional linkages within multinational corporations).

These experiences stress the role of an organizational umbrella for transregional learning activities. The strongest organizational linkages are given within those organizations, where regional institutions joined together to exchange experiences and act as gatekeepers for regional firms looking for contacts in other regions. Typical examples are innovation relay centres, business incubators and regional development agencies. The members of these networks often achieved a high level of cooperation due to similar functions and experiences strengthening the cognitive proximity. The main challenge, however, remains in the context of diffusion. Here, the impact is limited to concrete cases, where firms in the region see the benefits of contacts to and information about other regions. Regional representatives can try to raise the awareness for more international contacts, but without a clear market perspective these attempts remain limited in their impact (GIACHETTI, 2007; CAMPITELLI, 2007). Consequently, the organizational umbrella can help to manage the interface between representatives in the different region, the actual diffusion of learning experiences, however, is limited to regions with emerging economic relationships.

Initiatives by the European Union, e.g. the support of urban networks to exchange best practices and look for common solutions (EUKN, 2006) and the network of innovating regions (EIR, 2007), attempt to take up this idea of learning networks. Again, three prerequisites have to be considered. Firstly, the willingness to contribute to the network good “experiential

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knowledge” depends on the similarity of institutional needs within the regions, the exclusiveness of these benefits and the prevention of free-rider incentives by the network members. In the case of Hamburg-Midi Pyrenées, the urgent need for qualified staff within the aeronautics sector cause a high motivation within the big multinational firms and the public administration to look for suitable solutions. The specific case of Airbus as a multi-regional European firm strengthens the benefits of joint solutions, as apprentices with experiences in both regions can also contribute to the interregional learning strategy of this corporation. These circumstances lead to a relatively short-term visibility of benefits from transregional cooperation. Similarly, the experiences of the mutual learning platform within the European innovative regions network also stress the importance of awareness and motivation within the regions. The simple way to motivate via subsidies will only cause short-term activities, but actual investments in mutual understanding require a clear visibility of the direct use for daily business. In difference to the benchmarking dimension, where a more general idea, how to solve institutional needs, might be a product of the process, the cooperation to find a joint solution for a concrete problem reduces for the involved individuals the level of abstract understanding (Iurcovich et al., 2006, also stress the need for early participation of the regions to have sufficient motivation for the use of benchmarking as a learning tool). Consequently, the actors can start the learning processes by jointly exploiting single loop learning processes out of imitations from experiences of the others and gradually extend the way, how to process the experiences along a concrete problem to finally reach a level of double and deutero loop learning (GRABHER, 2004, on the relevance of learning along single projects).

Secondly, these learning experiences have to be framed within a general institutional umbrella. Here, the European integration processes with increasing levels of harmonisation of general institutional contexts, e.g. for qualification schemes and professional requirements, can act as a supporter to transregional learning processes, as all parties can refer to a common



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3 institutional basis. This formal harmonisation, however, has to be integrated into practical  
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5 implementation, which is still missing due to incumbent national or regional institutional rou-  
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7 tines (MARTIN; SUNLEY, 2006 discuss critically the concept of institutional path-dependences  
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9 in this context). The approach of single INTERREG projects has to be seen critically in this  
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11 context, as here the institutional framework is still dominated by domestic routines and single  
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13 case agreements without the option to use institutional solutions for other transregional coop-  
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22 Thirdly, the experiences from the concrete learning processes have to be documented and  
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24 extended to other problems to achieve the level of deuterio learning (GRABHER, 2004). The  
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26 exercise of the mutual learning platform within the European innovating region networks  
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28 could be a suitable tool for this type of documentation, if all integrated individual representa-  
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30 tives are continuously willing to participate in exchange activities. The general danger within  
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32 such network activities, however, refers to the crucial role of single actors on the regional  
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34 level and personal proximities between the actors. If the development of joint solutions is re-  
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36 stricted to individual specialists, the possibilities to transfer the experiences with learning rou-  
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38 tines and cooperation styles to other actors in the regions are limited. Consequently, the trans-  
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40 regional network depends might be restricted to a specific segment of problems and might  
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42 provide only low marginal benefits with time, as all activities are restricted to the personal  
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44 contacts of these specialists. The expectation of such restricted benefits might cause only low  
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46 incentives for further investments into the emergence of networks. Therefore, actual transre-  
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48 gional institutional learning networks will only affect few regions in specific situations with  
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50 clear – similar or complementary – urgent needs. In particular economically lagging regions  
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52 might face barriers to be integrated into such networks with more developed regions, if the  
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54 mutual benefits are not sufficiently obvious for all partners. For the activities of the European  
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56 Union to support learning networks, this observation should lead to more focused and concen-  
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trated programs, where regions with similar challenges can build their sub-networks and the network emergence is extended to more than one or two fields of cooperation.

6. Concluding remarks

The original idea of transregional institutional learning looks quite promising: By exploiting a big diversified pool of institutional ideas and experiences, the process of institutional knowledge generation and examination can be accelerated and lead to more institutional results. The European Union with a common institutional umbrella for regional development should provide an ideal environment for such learning tools. Consequently, several political programs and initiatives for transregional institutional have been launched, and private consultancy firms praise themselves as institutional knowledge brokers between successful and lagging regions. The brief overview to different perspectives on transregional learning processes, however, reveals several prerequisites, which are hardly met in practice. Even within multinational corporations, which can rely on joint organisational rules and programs to enhance cognitive proximity, institutional learning is restricted to adjustment processes towards joint organisational rules. Subsidiaries in different regions mostly have to fit into the multinational institutional setting and their institutional experiences hardly change anything within the corporation. Benchmarking approaches, which are the most common tool of political programs and consultancy projects, offer the opportunity to learn from a great variety of institutional experiences, but only on a general level. As most of the actors in administrations, agencies and firms on the regional level do not have necessary time, routines and incentives to look beyond the explicit institutional descriptions of experiences from other regions, learning impacts are restricted to formalised learning or imitations without considering the specific regional circumstances. Here, the European programs should look for a more focused supply of data and instruments to raise the awareness for benchmarking within different types of regions. The more differentiated the tools will be the more obvious possible benefits from learn-

ing experiences can be identified. Actors' learning networks can actually provide a suitable framework for such transregional learning processes. The necessary incentives and investments, however, restrict the range of suitable members to few regions with suitable conditions for joint learning and few specialists actually engaged into learning to jointly solve concrete problems. Therefore, regional actors should critically investigate the possible benefits of transregional learning activities and restrict their investments to clearly defined and concrete problems. It will, however, be important for the institutional development of the regions to concentrate firstly on intraregional learning skills and organizational prerequisites. Without these regional prerequisites, any transregional activity will remain an abstract idea. For the European programs, this means the need to strengthen already existing networking activities on an organizational level (e.g. innovation relay centres) or transregional cooperation level to have a common institutional umbrella available, but instead of supporting single projects to offer a more general platform for mutual learning with incentives to form sub-networks between regions in similar conditions and to widen the number and fields of integrated actors on the regional level. In general, however, any impact of these transregional activities crucially depends on intraregional capabilities and mutual benefits in concrete cases.

## Bibliography

ACS, Z.J. (2002): *Innovation and the Growth of Cities*, Cheltenham; Elgar.

AHLKE, B.; GÖRMAR, W.; KURNOL, J.; SCHÄFER, N. (2007): Transnationale Zusammenarbeit zur Raumentwicklung. Herausbildung, Stand und Perspektiven bis 2013, *Raumforschung und Raumordnung*, 65, 337-348.

AKBAR, H. (2003): Knowledge Levels and their Transformation: Towards the Integration of Knowledge Creation and Individual Learning, *Journal of Management Studies*, 40, 1997-2021.

- 1  
2  
3 ALDERSON, A.S.; BECKFIELD, J. (2003): Power and position in the world city system, *Ameri-*  
4  
5 *can Journal of Sociology*, 109, 811-851.  
6  
7  
8 ALFONSO-GIL, J.; TALBOT, D. (2007): The Aeronautical Sector: Recent Tendencies, in Al-  
9  
10 fonso-Gil, J. (ed.): *European Aeronautics: The Southwestern Axis*. Berlin; Springer.  
11  
12  
13 ALMEIDA, P.; SONG, J.; GRANT, R.M. (2002): Are firms superior to alliances and markets? An  
14  
15 empirical test of cross-border knowledge building, *Organization Science*, 13, 147-161.  
16  
17  
18 AMIN, A.; COHENDET, P. (2003): *Architecture of knowledge*, Oxford; Oxford University Press.  
19  
20 ANDERSON, J.R. (1995): *Learning and memory. An integrated approach*, New York et al.;  
21  
22 Wiley.  
23  
24  
25 ANDERSSON, C.; FRENKEN, F.; HELLERVIK, A. (2006): A complex network approach to urban  
26  
27 growth, *Environment and Planning A*, 38, 1941-1964.  
28  
29  
30 ANDERSSON, U. (2003): Managing the transfer of capabilities in multinational corporations:  
31  
32 the dual role of the subsidiary, *Scandinavian Journal of Management*, 19, 425-442.  
33  
34  
35 ANDERSSON, U.; FORSGREN, M. (2000): In search of centre of excellence: network embedded-  
36  
37 ness and subsidiary roles in multinational corporations, *Management International Re-*  
38  
39 *view*, 40, 329-350.  
40  
41  
42 ARGYRIS, C.; SCHÖN, D. (1996): *Organizational Learning II. Theory, Method, and Practice*,  
43  
44 Reading; Addison-Wesley.  
45  
46  
47 ASHEIM, B.T. (2002), Temporary Organisations and Spatial Embeddedness of Learning and  
48  
49 Knowledge Creation, *Geografiska Annaler, Series B: Human Geography*, 84, 111-  
50  
51 124.  
52  
53  
54 BARTLETT, C.A.; GHOSHAL, S. (1989): *Managing across borders: The transnational solution*,  
55  
56 Boston; Harvard Business School Press.  
57  
58  
59 BATHELT, H.; MALMBERG, A.; MASKELL, P. (2004): Clusters and knowledge: local buzz,  
60  
global pipelines and the process of knowledge creation, *Progress in Human Geogra-*  
*phy*, 28, 31-56.

- BATHELT, H.; SCHULDT, N. (2005): *Between luminaries and meat grinders: International trade fairs as temporary clusters*, Marburg; Spaces Discussion Paper 05-06.
- BJÖRKMAN, I.; BARNER-RASMUSSEN, W.; LI, L. (2004): Managing knowledge transfer in MNCs: the impact of headquarters control mechanisms, *Journal of International Business Studies*, 35, 443-455.
- BOSCHMA, R. (2005) Proximity and innovation: a critical assessment, *Regional Studies*, 39, 61-74.
- BOSCHMA, R.A.; FRENKEN, K. (2006): *Applications of Evolutionary Economic Geography*, Copenhagen; DRUID Working Paper 06-26.
- BRENNER, T. (2005): Innovation and cooperation during the emergence of local industrial clusters: An empirical study in Germany, *European Planning Studies*, 13, 921-938.
- BRESCHI, S.; LISSONI, F. (2001): Knowledge spillovers and local innovation systems: A critical survey, *Industrial and Corporate Change*, 10, 975-1005.
- BROWN, J.S.; DUGUID, P. (1991): Organizational Learning and Communities-of-Practice. Toward a unified view of working, learning, and innovation, *Organization Science*, 2, 40-57.
- BROWNE, J.; SACKETT, P.J.; WORTMANN, J.C. (1995): The Extended Enterprise. A Context for Benchmarking, in: ROLSTADAS, A. (ed.): *Benchmarking – Theory and Practice*, London et al.; Chapman & Hall, 11-21.
- BRUSONI, S.; PRENCIPE, A. (2001), Managing Knowledge in Loosely Coupled Networks: Exploring the Links between Product and Knowledge, *Journal of Management Studies*, 38, 1019-1035.
- CAMPITELLI, L. (2007): *The European BIC Network and Clusters*, Brussels, mimeo.
- CANTWELL, J.A.; PISCITELLO, L. (2005): Recent location of foreign-owned research and development activities by large multinational corporations in the European regions: The role of spillovers and externalities, *Regional Studies*, 39, 1-16.

- CANTWELL, J.A.; MUDAMBI, R. (2004): Multinational enterprises and competence-creating knowledge flows: A theoretical analysis, in: MAHNKE, V.; PEDERSEN, T. (eds.): *Knowledge flows, governance and the multinational enterprise*, New York; Palgrave Macmillan, 38-57.
- CASTELLACI, F. (2006): Theoretical convergence? A critical review of evolutionary and new growth theories, *Journal of Economic Surveys*, forthcoming.
- COOKE, P., DE LAURENTIS, C., TÖDTLING, F., TRIPPL, M. (2006): *Regional Knowledge Economies*, Cheltenham; Elgar.
- DAHL, M.S.; PEDERSEN, C.O.R. (2003): *Knowledge Flows through Informal Contacts in Industrial Clusters: Myths or Realities?* DRUID Working Paper No. 03-01, Copenhagen.
- DERUDDER, B.; TAYLOR, P.J.; WITLOX, F.; CATALANO, G. (2003): Hierarchical tendencies and regional patterns in the world city network: A global urban analysis of 234 cities, *Regional Studies*, 37, 875-886.
- DODGSON M., BESSANT J. (1996): *Effective Innovation Policy: A New Approach*, London et al.; International Thomson Business Press.
- DOLOWITZ, D.; MARSH, D. (1996): Who learns What from Whom? A Review of the Policy Transfer Literature, *Policy Studies Journal*, 25, 343-357.
- DUPUY C.; TORRE A. (2006): Local Clusters, trust, confidence and proximity, in: CHRISTOS, P., SUGDEN, R. & WILSON, J. (eds.): *Clusters and Globalisation: The Development of Urban and Regional Economies*, Cheltenham; Elgar.
- EICKELPASCH, A.; FRITSCH, M. (2005): Contests for cooperation – A new approach in German innovation policy, *Research Policy*, 34, 1269-1289.
- EUROPEAN COMMISSION (2004): *A new partnership for cohesion convergence competitiveness cooperation*. Third report on economic and social cohesion; Brussels; European Commission.

- 1  
2  
3 EUROPEAN COMMISSION (2005a): *European Innovation Scoreboard. Comparative analysis of*  
4  
5 *innovation performance*. Brussels, European Commission.  
6  
7  
8 EUROPEAN COMMISSION (2005b): *A Trend Chart in Innovation*, Brussels, European Commis-  
9  
10 sion.  
11  
12  
13 EUROPEAN COMMISSION (2006): *Innovative strategies and actions. Results from 15 years of*  
14  
15 *experimentation*. Working Document of the DG Regional policy. Brussels, European  
16  
17 Commission.  
18  
19  
20 EUROPEAN COMMISSION (2006a): *The Growth and Jobs Strategy and the Reform of European*  
21  
22 *cohesion policy*. Fourth report on economic and social cohesion. Brussels, European  
23  
24 Commission.  
25  
26  
27 EUROPEAN COMMISSION (2006b): *Regions for Economic Change*, Communication from the  
28  
29 Commission; Brussels; European Commission.  
30  
31  
32 EUROPEAN INNOVATING REGIONS – EIR (2007): *About the network*, [http://www.innovating-](http://www.innovating-regions.org/network/presentation/index)  
33  
34 [regions.org/network/presentation/index](http://www.innovating-regions.org/network/presentation/index) (download 27/12/07).  
35  
36  
37 EUROPEAN URBAN KNOWLEDGE NETWORK (2006): *About EUKN*, <http://www.eukn.org>  
38  
39 (download 27/12/06).  
40  
41  
42 FUJITA, M.; THISSE, J.-F. (2002): *Economics of Agglomeration. Cities, Industrial Location,*  
43  
44 *and Regional Growth*, Cambridge; Cambridge University Press.  
45  
46  
47 FUNKE, M.; NIEBUHR, A. (2005): Regional geographic research and development spillovers  
48  
49 and economic growth: Evidence from West Germany, *Regional Studies*, 39, 143-153.  
50  
51  
52 GALLAUD, D.; TORRE, A. (2004): Geographical proximity and circulation of knowledge  
53  
54 through inter-firm cooperation, in: WINK, R. (ed.): *Academia-Business Links. Euro-*  
55  
56 *pean policy strategies and lessons learnt*, Houndmills, Palgrave Macmillan, 137-157.  
57  
58  
59 GERTLER, M., WOLFE, D. & GARKUT, D. (2000): No place like home? The Embeddedness of  
60  
innovation in a regional economy, *Review of International Political Economy*, 7, 688-718.

- GIACHETTI, C. (2007): *The innovation relay centre network: best practices for supporting international cooperation, business and innovation for clusters and competence centres*, Pisa, mimeo.
- GIULIANI, E.; BELL, M. (2005): The micro-determinants of meso-learning and innovation: evidence from a Chilean wine cluster, *Research Policy*, 34, 47-68.
- GÖRMAR, W. (2006): Wer kooperiert mit wem in transnationalen Projekten? *Informationen zur Raumentwicklung*, No. 11/12, 675-686.
- GRABHER, G. (2004): Learning in projects, remembering in networks? Communalities, sociality, connectivity in project ecologies, *European Urban and Regional Studies*, 11, 103-123.
- GRAY, V. (1973): Innovation in the States: A Diffusion Study, *American Political Science Review*, 67, 1174-1185.
- GUPTA, A.K.; GOVINDARAJAN, V. (2000): Knowledge flows within multinational corporations, *Strategic Management Journal*, 21, 473-496.
- HASSINK, R. (2005): How to unlock regional economies from path dependencies? From learning region to learning cluster, *European Planning Studies*, 13, 521-535.
- HEINELT, H.; KOPP-MALEK, T.; LANG, J.; REISSERT, B. (2003): Policy-making in fragmented systems. How to explain success, in: KOHLER-KOCH, B. (ed.): *Linking EU and national governance*, Oxford, Oxford University Press, 135-153.
- HUGGINS, R. (2003): Creating a UK Competitiveness Index: Regional and local benchmarking, *Regional Studies*, 37, 89-96.
- IURCOVICH, L.; KOMNINOS, N. ET AL. (2006): *Mutual Learning Platform. Regional Benchmarking Report. Blueprint for regional innovation benchmarking*. Brussels, <http://www.innovating-regions.org/publications>, download on 09/01/2008
- KALDOR, N. (1970): The case for regional policies, *Scottish Journal of Political Economy*, 337-348.



- KAPLAN, R.S.; NORTON, D.P. (2001): *The Strategy-Focused Organization: How Balanced Scorecards Thrive in the New Business Environment*, Boston; MIT Press.
- KARL, H.; WINK, R. (2006): Innovation Policy and Federalism. The German Case, *International Journal of Foresight and Innovation Policy*, 2, 265-284.
- KHANNA, T.; GULATI, R.; NORIA, N. (1998): The Dynamics of Learning Alliances. Competition, Cooperation, and Relative Scope, *Strategic Management Journal*, 19, 193-210.
- KRUGMAN, P.R. (1991): Increasing returns and economic geography, *Journal of Political Economy*, 99, 483-499.
- KUNDA, Z. (1999): Social cognition. Making sense of people, 3<sup>rd</sup> ed., Cambridge; MIT Press.
- LANE, P.J.; SALK, J.E.; LYLES, M.A. (2001): Absorptive capacity, learning and performance in international joint ventures, *Strategic Management Journal*, 22, 1139-1161.
- LAUGHLIN, C. (1996): The Properties of Neurognosis, *Journal of Social and Evolutionary Systems*, 19, 363-380.
- LIYANAGE, S., NORDBERG, M., WINK, R. (2007): *Managing path-breaking innovations*, New York; Praeger.
- LUBLINSKI, A.E. (2003): Does Geographic Proximity Matter? Evidence From Clustered and Non-Clustered Firms in Germany, *Regional Studies*, 37, 453-467.
- MAGALHAES, R. (1998): Organizational knowledge and learning, in: VAN KROGH, G.; ROOS, J.; KLEINE, D. (eds.): *Knowing in firms: understanding, managing and measuring knowledge*, London et al., 87-122.
- MAGGIONI, M.A.; UBERTI, T.E. (2006): Inter-regional knowledge flows in Europe: an econometric analysis, in: FRENKEN, K. (ed.): *Applied Evolutionary Economics and Economic Geography*, Cheltenham; Elgar, forthcoming.
- MALMBERG, A.; MASKELL, P. (2002): The elusive concept of localization economies: towards a knowledge-based theory of spatial clustering, *Environment and Planning A*, 34, 429-449.



- MARTIN, R.; SUNLEY, P. (2003): Deconstructing clusters: chaotic concept or political panacea? *Journal of Economic Geography*, 3, 5-35.
- MARTIN, R.; SUNLEY, P. (2006): Path dependence and regional economic evolution, *Journal of Economic Geography*, 6, 395-437.
- MULLER, E.; ZENKER, A. (2001): Business services as actors of knowledge transformation: the role of KIBS in regional and national innovation systems, *Research Policy*, 30, 1501-1516.
- NONAKA, I.; REINMÖLLER, P.; TOYAMA, R. (2001): Integrated information technology systems for knowledge creation, in: DIERKES, M.; BERTHOIN-ANTAL, A.; CHILD, J.; NONAKA, I. (eds.): *Handbook for Organizational Learning and Knowledge*, Oxford; Oxford University Press.
- NONAKA, I.; TOYAMA, R.; NAGATA, A. (2000): The firm as a knowledge-creating entity: A new perspective on the theory of the firm, *Industrial and Corporate Change*, 9, 1-20.
- NOOTEBOOM, B. (2002): *Trust: forms, foundations, functions, failures, and figures*, Cheltenham; Elgar.
- NORTH, D.C. (1990): *Institutions, Institutional Change, and Economic Performance*, Cambridge et al.; Cambridge University Press.
- OECD – ORGANISATION FOR ECONOMIC COOPERATION AND DEVELOPMENT (2001): *Cities and regions in the new learning economy*, Paris: OECD.
- OERLEMANS, L.A.G.; MEEUS, M.T.H. (2005): Do organisational and spatial proximity impact on firm performance? *Regional Studies*, 39, 89-103.
- ORLIKOWSKI, W.J. (2002): Knowing in practice: Enacting a collective capability in distributing organizing, *Organization Science*, 13, 249-273.
- PEDERSEN, T.; PETERSEN, B.; SHARMA, D.D. (2003): Knowledge transfer performance of multinational companies, *Management International Review*, 43, 69-90.

- PISCITELLO, L.; RABBIOSI, R. (2006): *How does knowledge transfer from foreign subsidiaries affect parent companies' innovative capacity?* Copenhagen, DRUID Working Paper No. 06-22.
- POLT, W. ET AL. (2001): *Benchmarking Industry-Science Relations – The Role of Framework Conditions*, Mannheim and Vienna.
- RIZZELLO, S. (2000): *Cognition and Evolution in Economics*, Jena.
- SABEL C. (1996): Learning-by-Monitoring: The Dilemmas of Regional Economic Policy in Europe, in: OECD (ed.): *Networks of Enterprises and Local Development: Competing and Co-operating in Local Productive Systems*, Paris; OECD, 23-51.
- SCHLINK, G. (2006): *Les partages des idées créative: Quel rôle pour la proximité géographique?* Discussion Paper, Luxembourg.
- SCHULZ, M.; LLOYD, J.A. (2001): Codification and tacitness as knowledge management strategies. An empirical exploration, *Journal of High Technology Management Research*, 12, 139-165.
- SORENSEN, O. (2003): Social networks and industrial geography, *Journal of Evolutionary Economics*, 13, 513-527.
- SPENDOLINI, M.J. (1992): *The Benchmarking Book*, New York et al.; American Management Association.
- STEINER, M.; HARTMANN, C. (2006): Organizational learning in clusters: a case study on material and immaterial dimensions of cooperation, *Regional Studies*, 40, 493-506.
- STEINER, M.; PLODER, M. (2006): *Structure and strategy within heterogeneity: Multiple dimensions of regional networking*. Graz, Joanneum InTeReg Working Paper, No. 30-2006.
- SZULANSKI, G. (1996): Exploring internal stickiness: impediments to the transfer of best practices within the firm, *Strategic Management Journal*, 17, 27-43.

- 1  
2  
3 TAYLOR, P.J. (2001): Specification of the world city network, *Geographical Analysis*, 33,  
4  
5 181-194.  
6  
7  
8 TEECE, D.J. (2000): Strategies for Managing Knowledge Assets: the role of firm structure and  
9  
10 industrial context, *Long Range Planning*, 33, 35-54.  
11  
12  
13 TOMA, A. (1997): The European Commission Initiatives in the Field of Benchmarking, in:  
14  
15 TRONTI, L. (ed.): *Benchmarking Employment Performance and Labour Market Poli-*  
16  
17 *cies*, Berlin; Institute for Applied Socio-Economics, 164-174.  
18  
19  
20 TSAI, W. (2001): Knowledge transfer in interorganizational networks: effects of network posi-  
21  
22 tioning and absorptive capacity on business unit innovation and performance, *Acad-*  
23  
24 *emy of Management Journal*, 44, 996-1004.  
25  
26  
27 WINK R. (2007): Formal Knowledge Examination Institutions: Chance or Threat to European  
28  
29 Medium Technology SMEs? A Cognitive and Institutional Perspective, in: CAPPELLIN,  
30  
31 R. (ed.): *International knowledge and innovation networks for European cohesion,*  
32  
33 *growth and enlargement*, Cheltenham; Elgar, forthcoming.  
34  
35  
36 WINK, R. (2003): Transregional effects of knowledge management. Implications for policy  
37  
38 and evaluation design, *International Journal of Technology Management*, 26, 421-  
39  
40 438.  
41  
42  
43 WINK, R. (2006): Creativity and openness: The interrelationships between outsourcing knowl-  
44  
45 edge business services and metropolitan regions, in: COOKE, P.; SCHWARTZ, D. (eds.):  
46  
47 *Creative regions. Entrepreneurship and creativity*, Houndmills; Palgrave, forthcom-  
48  
49 ing.  
50  
51  
52  
53 ZAIRI, M.; SINCLAIR, D. (1995): Business Process Re-engineering and Process Management,  
54  
55 *Management Decision*, 33, 8-30.  
56  
57  
58  
59  
60

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